

## **Interim Compatibility Determination**

**Use:**               **Photography, Videography, Filming, or Audio Recording (Commercial, News, and Educational)**

**Refuge Name:** **Mariana Trench National Wildlife Refuge and  
Mariana Arc of Fire National Wildlife Refuge within the  
Marianas Trench Marine National Monument**

### **Establishing and Acquisition Authority(ies):**

The Marianas Trench Marine National Monument (Monument) was established by Presidential Proclamation 8335 on January 6, 2009. Implementing the direction from the Proclamation, the Interior Secretary on January 16, 2009, delegated management of the Monument to the U.S. Fish and Wildlife Service (FWS) by Secretarial Order 3284. The Secretary also directed that the "Trench Unit" and the "Volcanic Unit" of the Monument to be managed as units of the National Wildlife Refuge System (later titled the Mariana Trench National Wildlife Refuge and Mariana Arc of Fire National Wildlife Refuge, respectively; and hereafter collectively called "Monument/Refuge unit(s)"). The Secretarial Order establishing these areas as units of the Refuge System is authorized under the Fish and Wildlife Act of 1956; the National Wildlife Refuge System Administration Act of 1966, as amended; Section 2 of the Reorganization Plan No. 3 of 1950; and the Refuge Recreation Act of 1962.

The Monument and its two Refuge units are managed by the FWS through the Pacific Reefs National Wildlife Refuge Complex, headquartered in Honolulu, Hawai'i.

### **Refuges' Purposes\*:**

"... for the development, advancement, management, conservation, and protection of fish and wildlife resources ... 16 U.S.C. § 742f(a)(4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. § 742f(b)(1) (Fish and Wildlife Act of 1956).

"... conservation, management, and ... restoration of the fish, wildlife, and plant resources and their habitats ... for the benefit of present and future generations of Americans..." 16 U.S.C. § 668dd(a)(2) (National Wildlife Refuge System Administration Act)

"... suitable for— (1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species ..." 16 U.S.C. § 460k-1  
"... the Secretary ... may accept and use ... real ... property. Such acceptance may be accomplished under the terms and conditions of restrictive covenants imposed by donors ..." 16 U.S.C. § 460k-2 (Refuge Recreation Act (16 U.S.C. § 460k-460k-4), as amended).

\*applicable for both refuge units, as taken from the Refuge Purposes Database at:  
[http://www.fws.gov/refuges/policiesandbudget/purposes/Purposes\\_Search.cfm](http://www.fws.gov/refuges/policiesandbudget/purposes/Purposes_Search.cfm)

### **Other Management Direction:**

#### *Presidential Proclamation 8335*

"...for the purpose of protecting the objects identified above..." "... [Interior Secretary] shall not allow or permit any appropriation, injury, destruction, or removal of any feature of this monument except as

provided for by this proclamation or as otherwise provided for by law”

“...Regulation of Scientific Exploration and Research...Subject to such terms and conditions as the Secretary deems necessary for the care and management of the objects of this monument, the Secretary of the Interior may permit scientific exploration and research within the monument, including incidental appropriation, injury, destruction, or removal of features of this monument for scientific study...”

*Secretarial Order 3284*

“...For each of the areas subject to this delegation, the Director of the [FWS] shall provide for the proper care and management of the monument, including all objects of scientific and historic interest therein; the conservation of fish and wildlife; and the development of programs to assess and promote national and international monument-related scientific exploration and research.” (Section 4.a.(2) . . . subject to the provisions of the proclamation [8335] establishing this Monument. . .”(Section 4,d)

*National Wildlife Refuge System Mission:*

The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

**Description of Use:**

The National Wildlife Refuge System Improvement Act of 1997 identifies compatible wildlife photography as well as hunting, fishing, wildlife observation, environmental education and interpretation as priority wildlife-dependent public uses of the Refuge System. As one of the six priority public uses of the Refuge System, wildlife photography is to be encouraged when compatible with the purpose(s) of the refuge. However, wildlife photography is distinguished from commercial photography<sup>1, 2</sup> in national wildlife refuges. Refuge System principles for wildlife photography can apply to these deep Monument/Refuge units also, including: facilitating safe wildlife viewing opportunities; promoting public understanding of, and increase public's appreciation for, America's natural resources; facilitating and providing opportunities for quality educational experiences consistent with criteria describing quality found in 605 FW 1.6.

Due to the extreme depths and sophisticated technological capability needed to access Monument/Refuge units; photography, video, filming, and audio recording (“recording”) are the primary ways that the FWS and others may gain access to and information about the area. The use may be conducted by recording equipment attached to manned submersibles, remotely operated unmanned vehicles, landers, or using equipment connected to long hydrographic cables. Equipment and any platform it is on may have lighting adequate for navigation and illuminating subjects and provisions for luring marine organisms using bait.

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<sup>1</sup> The FWS manual defines commercial photography as “a visual recording (motion or still) by firms or individuals (other than news media representatives) who intend to distribute their photographic content for money or other consideration. This includes the creation of educational, entertainment, or commercial enterprises as well as advertising audio-visuals for the purpose of paid product or services, publicity, and commercially oriented photo contests.(FWS policy: 605 FW 5.6).

<sup>2</sup> Commercial recordings are also described in Title 43 of the Code of Federal Regulations, Section 5.1, “no picture may be filmed, and no television production or sound track made on any area administered by the U.S. Fish and Wildlife Service ... of the Department of the Interior, by any person other than amateur or bona fide newsreel and news television photographers and soundmen, unless written permission has been obtained from the Service having jurisdiction over the area.”

The purposes of recordings are to further the global understanding of the Monument/Refuge units, the Earth and its natural resources and processes, deep ocean exploration, and to improve the management of such resources. Because of the extreme environments of the Monument/Refuge units and their relative inaccessibility, very little is known about these areas. Activities are therefore essentially innovative exploration, and recording is a means to not only collect data, but to disseminate it to the world.

In this CD we are considering "recordings" differently than may be considered on a more mainstream refuge CD. We are collectively considering activities done for wildlife photography, for news and educational purposes (considered priority refuge uses), as well as documentaries and commercial purposes. We are considering these together because the activities conducted in the extreme environment of these monument units are 1) functionally the same, 2) limited to a few individuals and institutions that have the fiscal and technical capability to access the deep areas, and 3) there is little likelihood that recordings made would not have commercial value and intentions of some commercial use. For example, the permittee may film the Trench floor, record the sounds of serpentine mud volcanoes, and video the explorers and scientists in their work. Because all of these activities in the Monument/Refuge units are novel and exceptional throughout the world, these recordings may be included in a live "virtual classroom" event, be broadcast through news media, and be the subject of a documentary. After filming and editing, the permittee could also attempt to sell the recordings made for commercial purposes. Products made in this area are appealing to the general public because it exposes an exceptional environment - representing some of the last frontiers of discovery on Earth. It is also captivating because it is accessible to only highly specialized equipment and has been inaccessible to humans for decades. Commercial filming, video, photography or audio recording that are not related to natural, historic, or cultural subjects of the Monument/Refuges are not covered under this CD (e.g. extreme sports photography, filming a movie unrelated to the Monument or Refuge mission, etc.). We clearly note these are exceptional and unique circumstances that warrant treating both commercial and noncommercial activity together; this should not be viewed as precedent for doing so on other national wildlife refuges.

All recording proposals are anticipated to coincide with other projects for exploration, research, survey or scientific collecting; however, these scientific activities are considered in a separate CD. This recordings CD only covers the acquisition of digital or photographic information and does not consider or include any sampling or specimen collections. Recordings may be conducted in the Monument/Refuge unit benthic environments as long as it meets the criteria of being related to natural, historic, or cultural features. Commercial use proposals must also specify how they plan to contribute to the achievement of the Refuge System mission and Monument and Refuge purposes. Recording proposals may be for any time of the year and may be requested for any bottom area of the Monument/Refuge units. The FWS in consultation with NOAA and others, as applicable, will evaluate each proposal and may put limits on the activities in an effort to ensure that negative impacts to resources are avoided or limited.

Recording projects involving video, filming, photography or sound would likely have different protocols and methods for recording the bottom environments and species of the Monument/Refuge unit as well as different strategies for reaching diverse audiences. Therefore, each proposal necessitates its own management review during the permitting process. Each project would be carefully reviewed to prevent any significant short-term, long-term, or cumulative impacts. Proposals for educational, interpretation, media, documentary or commercial recordings would be evaluated by FWS staff, applicable partners at the National Oceanic and Atmospheric Administration, experts with the U.S. Geologic Survey, as well as other subject-matter experts as determined necessary by the FWS. Evaluations and reviews would be conducted to determine if the species recorded, methods used, or habitat type and locations affected may lead to undesirable cumulative impacts. All projects would be required to have a Monument/Refuge unit Special Use Permit (SUP). This degree of review would help ensure numerous levels and types of impacts

are carefully considered before any permit for commercial or non-commercial photography, filming, video, or audio recording is issued. Within the SUP, conditions would be clearly defined so as to protect and conserve the existing resources found within the Monument/Refuge unit. Some of the standard and specific conditions are included in this Interim CD under Stipulations Necessary to Ensure Compatibility. Per Presidential Proclamation 8335, nothing in this CD shall restrict scientific exploration or research activities by or for the Secretary of Commerce, and nothing shall be construed to require a permit or authorization for the Secretary of Commerce or his respective scientific activities. In addition, activities and exercises of the Armed Forces (including those carried out by the United States Coast Guard) as identified by Presidential Proclamation 8335, are not required to undergo compatibility review and are exempted from the requirements of this CD.

This Interim CD is prepared as a bridge to allow photography, filming, video, and audio recording for commercial uses or news, public information, and education until a final CD can be prepared along with the Trench Monument Management Plan.

**Availability of Resources:**

Due to the complex nature of accessing the extreme depths and environments of the Monument/Refuge units for recordings, only a handful of entities have the technology and capability to access their benthic environments. Because this unique protected area is relatively new, it is difficult to accurately anticipate the level of a proposed recording uses. We base our prediction of SUP applications on 1) the assumption that most scientific SUPs would also include proposals for educational and commercial recording, 2) the number of contacts received by FWS for SUP since the establishment of the Monument/Refuge units, and 3) our current capability to administer SUPs. During the period of this Interim CD, we predict three recording SUPs would be issued in a calendar year. However, public comment raised concerns that three SUPs may be impractical and unnecessarily limiting. For example, one research cruise may support multiple scientific investigations and recordings for documentary use, or one ship may be contracted to support multiple cruises – and where recordings will occur. In such instances SUPs may total more than the three SUPs per year considered here. In such case, efficiencies in the FWS review of SUPs may be realized due to the singular platform from which they operate, and more than three SUPs could conceivably be administered without substantially increasing the administrative burden. We will assess the potential to find efficiency in permitting on a case-by-case basis. If interest in SUPs exceeds what is predicted here, we will reevaluate compatibility before the next year of permitting. The bulk of the cost for this SUP is incurred in staff time to review proposals and logistics, coordinate with applicants, ensure commercial uses contribute to the achievement of the Refuge System mission and Monument/Refuge purposes, write SUPs, oversee on-going projects, and review the project post-recording development and results. Law enforcement and dissemination of information about the projects in the Monument are not included in these cost estimates. We project that administering a recording project SUP may require 4 weeks of intermittent staff time. A permit fee equaling one third of the total cost (Table 1.) would be collected as Offsetting Revenue (\$2,700) from each of the permittees per calendar year. At this level of use and considering the SUP fee, we have sufficient resources to administer the use. We will manage this use at the projected level with staff capabilities at the Pacific Reefs National Wildlife Refuge Complex.

The protected area of these Monument/Refuge units is at the bottom (the submerged lands and benthic resources) of the Mariana Trench and submarine volcanoes and does not include the overlying water column. Access to it is through unmanned, remotely operated vehicles, tethered equipment, or manned submersibles. There are no FWS facilities in this extreme environment. Permittees would pay the cost of all their actions related to these Monument/Refuge units. Permittees working in the Monument/Refuge units would have to be self-sufficient for safely accessing the Monument/Refuge unit and would be required to obtain any additional permits needed for the actions. Any accidents or responses involving the

Permittees will be their sole financial responsibility. Any funds expended by the FWS, or other authorized governmental entities, above general SUP administration, or as a result of an accident or response, will be reimbursed by the Permittee.

Table 1. Estimated FWS cost of SUP administration

Category and Itemization	Annual (\$/yr)
Administration and Management	\$4,100
Monitoring & Adaptive Management	\$4,000
<b>Total estimated cost</b>	<b>\$ 8,100</b>
<b>Total Offsetting Revenues (3 x \$2,700)</b>	<b>\$ 8,100</b>

The numbers above reflect the current estimated costs for three permits per year. Estimated costs were calculated using 5 % of the base cost of a GS12/5 refuge biologist, 2% cost of a GS13/5 Deputy Refuge Project Leader, and 5% of a GS7/5 biological technician assuming this use would use that "portion of a year" to administer.

#### **Anticipated Impacts of the Use:**

Most of the possible impacts recognized are over or within the water column, and therefore outside the boundary of both Monument/Refuge units (covering only at the bottom). These impacts may include: (1) disturbance of foraging sea birds and pelagic fish; (2) disturbance of marine mammals; (3) disturbance of endangered and threatened sea turtles; (4) release of pollution and contaminants; (5) disturbance and damage to fish, invertebrates, and algae.

Possible impacts to the Monument/Refuges' bottom community may include (1) disturbance to benthic marine organisms by submersible devices or artificial light; (2) introduction of metals and other materials or equipment that are needed to travel to the bottom, and then discarded into the Monument/Refuge unit in order to return to the surface; and (3) accidental introduction of non-native extremophile species from equipment or bait used during the operation.

The bottom features of the trench are likened to inverted islands of biodiversity and each submarine volcano is likewise a submerged island. Each may hold unique biological communities from feature to feature and could potentially be susceptible to invasions by organisms that are not native to that feature. However, accidental introduction of non-native extremophile species or cross contamination of species between deep sites is highly unlikely due to the extremely variable pressure, temperature, and light conditions that exist between the bottom and at surface level. Microbes that may attach to equipment at the bottom lose viability very quickly at surface level, and because equipment would likely remain on the surface for hours before being redeployed, deepwater microbes are not anticipated to survive. Likewise, bait (fish, squid) that may be used to attract benthic species to scientific equipment are not anticipated to pose harm because microbes from surface waters regularly "rain down" to the deep sea. Viruses are also highly unlikely to persist on equipment or in bait due to pressure differences. As added precaution, however, SUPs would require external hard surfaces of bottom equipment be disinfected (i.e., freshwater or with diluted bleach solution) before deploying to other locations.

All recording would be designed and managed in a fashion using best management practices to eliminate or minimize these impacts. However, even with proper management and execution of a well-planned project, so little is known about the Trench and Volcanic units, certain responses may occur that could not be predicted or are not easily recognized.

Although a single such project within a single year may cause few, if any, negative resource impacts, it may in fact cause cumulative impacts over multiple years or when considered additively with all other

projects to occur within the Monument/Refuge unit. Therefore, it is critical for refuge managers to examine all projects with a multi-year timeframe in mind and consider all photography and audio and video recording projects that are planned concurrently in the Monument before approval is granted. It may be appropriate to set a limit to the number of such projects occurring in a particular habitat or relative to a single species or species group.

**Public Review and Comment:**

A notice to the public soliciting comments on the draft CD was posted on the Monument and Refuges' websites and available at the Complex office between January 11 and 26, 2012. Known interested constituents, members of the Mariana Monument Advisory Council, and other partners were directly notified by email of the notice and draft CD availability. Four comments were received over the 15 day comment period and changes are reflected in the final CD as a result of public comments.

**Determination (check one below):**

- ☐ Use is Not Compatible  
☒ Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

Applicants for recording would be required to obtain a FWS SUP. These permits may stipulate more detailed access restrictions and regulations to protect wildlife or Monument/Refuge integrity from anticipated site-specific negative effects caused by the project. At the discretion of the Refuge Project Leader, FWS-approved staff may be assigned to accompany filming expeditions. Per Presidential Proclamation 8335, nothing in this CD shall restrict scientific exploration or research activities by or for the Secretary of Commerce, and nothing shall be construed to require a permit or authorization for the Secretary of Commerce or his respective scientific activities. In addition, activities and exercises of the Armed Forces (including those carried out by the United States Coast Guard) as identified by Presidential Proclamation 8335, are not required to undergo compatibility review and are exempted from the requirements of this CD.

**GENERAL TERMS AND CONDITIONS:**

A more comprehensive list of Refuge conditions and restrictions is included in 50 CFR Part 27. Not all of these conditions and restrictions would apply to every photography, filming, video or audio recording project. The type of use and where the activity occurs would determine the appropriate conditions.

The FWS encourages and supports compatible filming and photography in order to acquire information upon which decisions regarding management of units of the Refuge System may be based and to provide access to this remote area to the public through the products of this work. Priority will be given to projects that contribute to the knowledge base of and management for biodiversity, enhancement, protection, use, preservation, and management of native wildlife populations and their habitat. Commercial uses must contribute to the achievement of the Refuge System mission and Refuge/Monument purpose, (50 CFR 29.1)

In accordance with Department of the Interior filming regulations (43 CFR Part 5.1)

- Utmost care will be exercised to see that no natural features are injured, and after completion of the work the area will, as required by the official in charge, either be cleaned up and restored to its prior condition or left, after clean-up, in a condition satisfactory to the official in charge.
- Credit will be given to the U.S. Fish and Wildlife Service and the Department of the Interior through the use of an appropriate title or announcement.

*Interim Compatibility Determination:  
Photography, Videography, Filming, or Audio Recording (Commercial, News, and Educational)*

- Pictures will be taken of wildlife only when such wildlife will be shown in its natural state or under approved management conditions if such wildlife is confined.
- Any special instructions received from the official in charge of the area will be complied with.
- Any additional information relating to the privilege applied for by this application will be furnished upon request of the official in charge.

**SPECIFIC TERMS AND CONDITIONS: (include but are not limited to)**

All photography, filming, video, and audio recording permit holders would be required to submit an annual report to the Pacific Reefs National Wildlife Refuge Complex Project Leader/Superintendent that summarizes their activities for a given year and a final report when the project is completed. The report would include at a minimum the following: project title, SUP number, fiscal year, progress, important findings, and problems encountered, proposed resolution to problems, preparer, and date prepared.

All films, books, and other recordings of images and sounds, publications and products derived from the SUP will appropriately acknowledge the U.S. Fish and Wildlife Service and those activities conducted under National Wildlife Refuge System Special Use Permit. Appropriate acknowledgement should also be given to the National Oceanic and Atmospheric Administration, when applicable. All reports, publications, or products will reference the Marianas Trench Marine National Monument.

If the proposed methods would materially impact, or cause appropriation, injury, destruction, or removal of any Monument/Refuge resource, the permittee must identify the issues in advance. Highly intrusive or manipulative photography or recording is generally not permitted. As much of these recordings will be experimental due to the extreme environment, any non-anticipated disturbance would immediately be brought to the attention of the Refuge Project Leader or Manager.

Permittees are required to disinfect external hard surfaces of bottom equipment (i.e., with bleach solution of at least 1:32 dilution of commercial bleach in freshwater [1/2 c bleach per gallon] for equipment small enough to be submerged into a 55-gallon barrel without damage, or for larger equipment- thoroughly pressure-washed with freshwater) before deploying to other locations. The bleach solution would be disposed of properly.

Permittees are responsible for acquiring and/or renewing any necessary additional permits prior to beginning or continuing their project.

Permittee would be responsible to cover all Refuge costs associated with the recording activity beyond what is predicted in this CD.

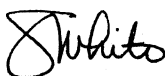
Permittee must provide FWS with at least two copies of all products, commercial or otherwise, generated from the Monument/Refuge units or as a result of the information gained or work completed under a SUP, including materials generated at any time in the future following expiration of this permit. Products are provided for the non-commercial, governmental use of informing people about the Monument, Refuge, and the National Wildlife Refuge System.

The Project Leader, Refuge Manager or designee can suspend or modify conditions or terminate research that is already permitted and in progress should unacceptable, unforeseen, or unexpected impacts or issues arise or be noted.

**Justification:**

Photography, videography, filming, and audio-visual recordings in the Monument/Refuge units are inherently valuable to the FWS, governmental partners, and the public and are a necessary tool to further the aims of public education programs and public outreach as well as the primary method for gathering scientific information. The permitting of these pursuits supports the Presidential directive to study and protect this sensitive area. This is particularly true in this case where many of the resources remain undiscovered, unknown, and presumably in pristine or relatively pristine condition. By allowing recordings in conjunction with other uses (e.g., exploration, scientific collection, and surveys) proposed for the area we are encouraging a use that will have minimal impact but enormous reward in the form of information and inspiration. Thus, by effectively administering, tracking, and managing proposed uses through SUPs, the use would not materially interfere with or detract from the fulfillment of Proclamation 8335, the Refuge System mission, or the purposes for which these refuge units were established.

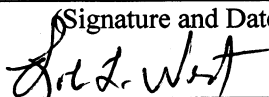
**Signature:** Refuge Manager



Digitally signed by Susan White  
DN: cn=Susan White, o=U.S. Fish and  
Wildlife Service, ou=Pacific Reefs  
National Wildlife Refuge Complex,  
email=susan\_white@fws.gov, c=US  
Date: 2012.02.08 09:09:25 -10'00'

(Signature and Date)

**Concurrence:** Regional Chief

 2/9/12

(Signature and Date)

**Mandatory 10- or 15-year Re-Evaluation Date:** 10 year 2/9/22